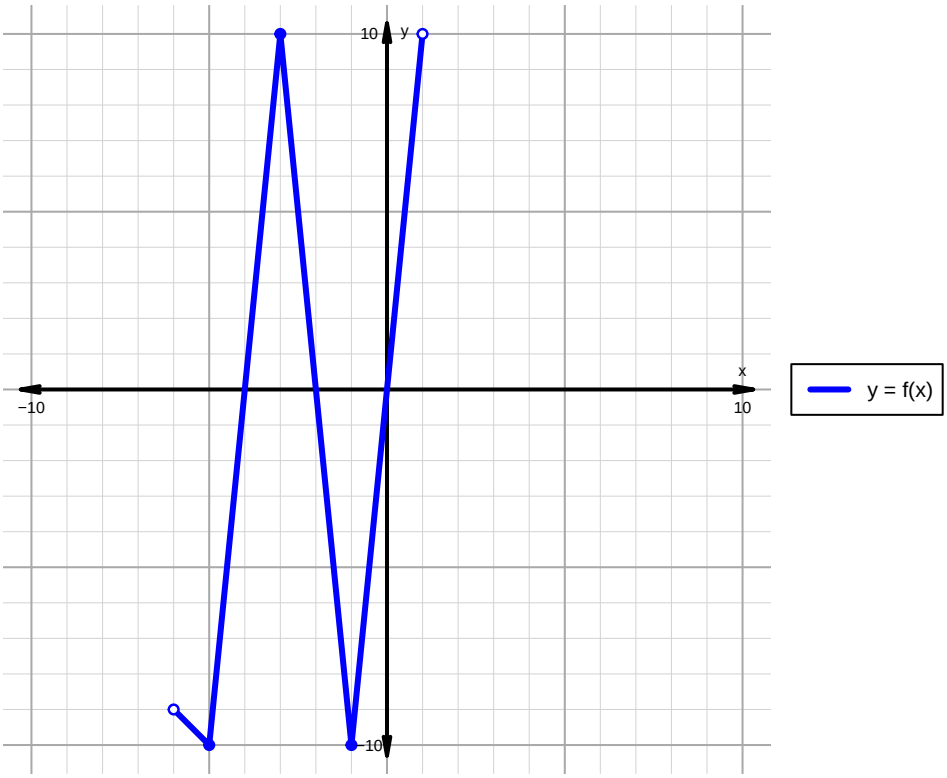
Name: Date:

Intervals, Transformations, and Slope Solution (version 125)

1. The function f is graphed below.

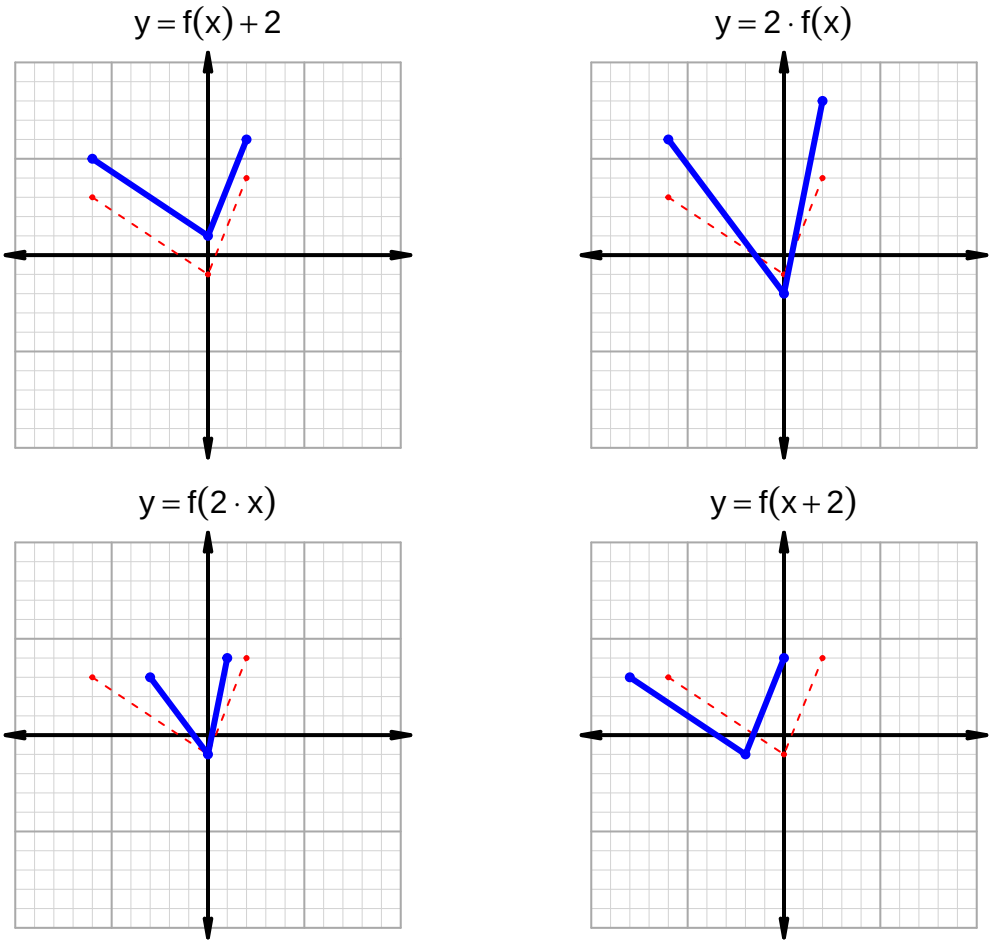


Indicate the following intervals using interval notation. Remember, you can use $\cup$ between two intervals to indicate the union. Except for range, all intervals will indicate x values; this is standard.

Feature	Where
Positive	$(-4,-2)\cup(0,1)$
Negative	$(-6,-4)\cup(-2,0)$
Increasing	$(-5,-3)\cup(-1,1)$
Decreasing	$(-6,-5)\cup(-3,-1)$
Domain	$(-6,1)$
Range	$(-10,10)$

Intervals, Transformations, and Slope Solution (version 125)

2. In the four graphs below, $y = f(x)$ is graphed as a dotted line. With a solid line, please graph the transformations indicated by the equations below.



3. Let function g be defined by the table below. Use the formula $\frac{g(x_2)-g(x_1)}{x_2-x_1}$ to find the average rate of change between $x_1 = 86$ and $x_2 = 98$. Express your answer as a reduced fraction.

x	$g(x)$
56	98
66	86
86	56
98	66

$\frac{f(98)-f(86)}{98-86} = \frac{66-56}{98-86} = \frac{10}{12}$

The greatest common factor of 10 and 12 is 2. Divide numerator and denominator by the greatest common factor.

$$\text{AROC} = \frac{5}{6}$$